

Lower Green Bay and Fox River Area of Concern

Reaching our targets will lead us to our goal of delisting the AOC, which means the ecological benefits of Lower Green Bay and Fox River have been restored to an acceptable level. We will have achieved this when public uses are no longer impaired by legacy contamination and native plants and wildlife are sustainably restored. As toxic sediment is removed and habitat restoration continues, the river is becoming a more and more valuable resource for recreation and the local economy.



The Cat Island chain framework was completed in 2013. Clean dredged material will be beneficially re-used as fill for the next 20-30 years.



Restoration and protection of Northern Pike spawning habitat is a priority along the west shore of southern Green Bay.

To learn more about Lower Green Bay and Fox River AOC projects and progress visit <http://dnr.wi.gov>, search "Green Bay AOC." For more details, refer to the Area of Concern Remedial Action Plan Updates.

Lower Green Bay Fox River—part of the largest fresh surface water resource in the world—the Great Lakes ecosystem



Wisconsin DNR Office of Great Waters

Brochure developed by the UW-Extension Regional Natural Resources Program and the Wisconsin Department of Natural Resources, Office of Great Waters. Graphic design by Jeffrey J. Strobel, UW-Extension Environmental Resources Center.



Lower Green Bay and Fox River Area of Concern

BENEFICIAL USE IMPAIRMENT RESTORATION REPORT

Summer 2017

Lower Green Bay and the Fox River

below the De Pere Dam were designated an Area of Concern (AOC) in the 1980s because contaminated river sediment impaired public benefits such as fish consumption, healthy fisheries, shipping channels and wildlife habitat.





Dave Turicano



Christopher Rand



Annette Pellegrin

The Wisconsin Department of Natural Resources (WDNR) and citizen groups identified 13 Beneficial Use Impairments (BUIs) to target here for improving the river.

See the progress report inside ➡



The Bolt Company



DNR

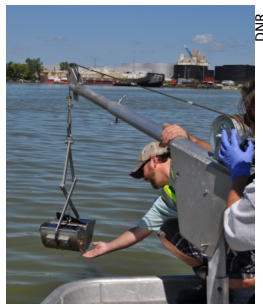
Lower Green Bay and Fox River AOC – Restoration Status Update

Summer 2017

Tackling AOC problems, known as Beneficial Use Impairments in the Area of Concern program, requires several steps. We must understand the causes and define the extent of the impairments through monitoring, assessment, and data analysis. We then determine the necessary actions to address the problems, and implement them.

Actions to address AOC problems can be large and complex, requiring the coordinated efforts of many partners over multiple years. Upon completing the necessary actions, we must verify through monitoring that we have achieved our goals for cleanup and restoration. Once the goals have been met and the problems have been addressed, the AOC designation can be removed.

This update shows the current status of the removal process for 13 impairments of the Lower Green Bay and Fox River AOC – complete, underway, or not started – and the next steps. Dates in parentheses indicate the anticipated project completion.



Researcher samples for organisms in the riverbed.

BUI Removal Phases:

MA

MONITOR & ASSESS: define the problem, gather data and review literature, consult with experts.

DP

DEVELOP AOC PROJECTS: engage stakeholders to develop the set of projects that are necessary for reaching AOC goals.

IP

IMPLEMENT PROJECTS: take action to improve conditions within the AOC if monitoring data shows goals are not being met.

VR

VERIFY RESULTS: after actions have been taken, monitor to determine if target has been met.

RM

FORMAL BUI REMOVAL: targets have been met. BUI removal documentation is being prepared or reviewed, or has been submitted.

Status of Each Phase:

Not Started

Underway

Complete

There are health concerns with eating fish and wildlife

NEXT STEPS:

- Complete removal of riverbed sediments containing PCBs which contaminate fish and wildlife (2019).
- Continue long-term monitoring to assess fish consumption advisories following PCB cleanup (2019 and after).

MA

DP

IP

VR

RM

Fish and wildlife populations are degraded

NEXT STEPS:

- Complete the assessment of fish and wildlife populations (2017).
- Identify and prioritize projects, with consideration for challenges of species success in an urban environment (2018).
- Complete cleanup of riverbed sediments containing harmful PCBs (2019)

MA

DP

IP

VR

RM

There are increased rates of fish tumors and deformities

NEXT STEPS:

- Remove primary source of tumor-causing contaminants by completing cleanup of former gas plant site (2018).
- Conduct fish tumor assessment following cleanup projects (2019 and after).

MA

DP

IP

VR

RM

There is increased potential for bird and animal deformities and reproductive problems

NEXT STEPS:

- Complete cleanup of riverbed sediments containing PCBs, which are known to cause deformities and reproduction problems (2019).
- Evaluate results of USGS tree swallow and USFWS bald eagle studies to determine extent of impairment.

MA

DP

IP

VR

RM

Communities of sediment-dwelling organisms are degraded

NEXT STEPS:

- Complete cleanup of polluted riverbed sediments (through 2019).
- Evaluate results of USGS study of sediment-dwelling organisms to determine the health of the benthic community.
- Identify next steps.

MA

DP

IP

VR

RM

Fish do not taste good

NEXT STEPS:

- Compile available information from angler surveys, wastewater permits, and historical documents and develop a BUI removal document.
- Obtain public input on removing this BUI.

MA

DP

IP

VR

RM

Waterbody is not recommended as a drinking water source

NEXT STEPS:

- Complete the study of cyanobacteria (blue-green algae) and cyanotoxins caused by blue-green algae blooms to determine if waters in the lower Bay are meeting standards for drinking water (2019).
- Identify next steps.

MA

DP

IP

VR

RM

Dredging activities for commerce or navigation are restricted

NEXT STEPS:

- Complete cleanup of sediment polluted with polycyclic aromatic hydrocarbons (PAHs) and heavy metals at former gas plant site (2018).
- Complete cleanup of riverbed sediments containing PCBs in the Lower Fox River and river mouth to Green Bay (through 2019).

MA

DP

IP

VR

RM

Excessive nutrients cause undesirable algae

NEXT STEPS:

- Identify the necessary management actions to address eutrophication for the AOC (2018).
- Complete the assessment of cyanobacteria and cyanotoxins from blue-green algae in the AOC (2019).

MA

DP

IP

VR

RM

Water contact through beach use or other recreation is limited

NEXT STEPS:

- Continue to assess recreational use risk in the AOC (2019).
- Complete the assessment of cyanobacteria and cyanotoxins from blue-green algae in the AOC (2019).
- Develop a strategy for continuous monitoring of harmful algal blooms in the lower Bay (2019).

MA

DP

IP

VR

RM

Appearance of river and waterfront needs improvement

NEXT STEPS:

- Continue aesthetics monitoring volunteer data collection.
- Determine necessary management actions based on monitoring results.

MA

DP

IP

VR

RM

Communities of small organisms living in the water are degraded

NEXT STEPS:

- Evaluate results of USGS plankton study to determine health of the community of small organisms in the AOC.
- Identify the necessary management actions to address AOC-related nutrient and sediment impacts to plankton health.

MA

DP

IP

VR

RM

Loss of fish and wildlife habitat

NEXT STEPS:

- Complete the assessment of fish and wildlife habitat restoration project opportunities (2017).
- Select management actions in collaboration with technical team.
- Implement selected habitat projects.

MA

DP

IP

VR

RM

